Delaware Department of Transportation Approved Products List Temporary Impact Attenuators / Sand Crash Cushion Arrays NCHRP-350 **MASH Test FHWA Eligibility** Pay Item Number Manufacturer **Product Name** Test Level Letter TEMPORARY IMPACT ATTENUATORS - GATING, NON-REDIRECTIVE Energy Absorption Systems, 809002 N-E-A-T System TL-2 CC-25 B-26 809002 TL-2 CC-47B CC-47 Energy Absorption Systems, Triton Barrier CET CC-47A 809003 TL-3 CC-47B CC-47C Energy Absorption Systems, 809003 Triton Barrier CET (ACZ-350) TL-3 CC-47D TEMPORARY IMPACT ATTENUATORS - NON-GATING, REDIRECTIVE SCI SmartCushion® TL-3 SCI100GM Impact 809005 Work Area Protection TL-3 CC-128 Attenuator CC-112 (TL-3) 809004 CC-112A Energy Absorption Systems, (TL-2 & TL-3) Quadguard M10 TL-2 / TL-3 Inc. CC-112B (TL-3) 809005 CC-112C (TL-3) Lindsay Transportation 809004 Universal TAU-M MASH Crash Cushion TL-2 CC-146 Solutions, Inc. Lindsay Transportation 809005 TI -3 Universal TAU-M MASH Crash Cushion CC-147 Solutions, Inc. 809005 Trinity Highway Products, LLC ADIEM (Advanced Dynamic Impact) TL-3 CC-38 809005 Barrier Systems by Lindsay X-TENuator TL-3 CC-109 CC-75 (TL-2 & TL-3) 809004 CC-75A (TL-2 & TL-3) Barrier Systems by Lindsay TAU-II Crash Cushion TL-2 / TL-3 CC-75B (TL-2 & TL-3) 809005 CC-75C (TL-2 & TL-3) 809005 TAU-IIR Crash Cuhsion TL-3 CC-75D Barrier Systems by Lindsay CC-35 (TL-3) CC-35A (TL-3) CC-35B (TL-3) 809004 CC-35C (TL-2) CC-35D (TL-3) CC-35E (TL-3) CC-35F (TL-3) CC-35G Energy Absorption Systems, TL-2 / TL-3 Quadguard / Quadguard II / Quadguard CZ (TL-2 & TL-3) CC-35H (TL-2 & TL-3) CC-351 809005 (TL-2 & TL-3) CC-35J (TL-2 & TL-3) CC-35L (TL-2 & TL-3) **CC-35M**

(TL-2 & TL-3)

Delaware Department of Transportation Approved Products List Temporary Impact Attenuators / Sand Crash Cushion Arrays NCHRP-350 **MASH Test** FHWA Eligibility Pay Item Number **Product Name** Manufacturer Test Level Leve Letter CC-54 (TL-3) 809004 Trinity Highway Products, LLC Trinity Attenuating Crash Cushion (TRACC) TL-2 CC-54A (TL-2) CC-54C (Transition) (Modular Base) CC-54F 809005 Trinity Highway Products, LLC Trinity Attenuating Crash Cushion (TRACC) TL-3 (TL-2 & TL-3) CC-54G (TL-2 & TL-3) CC-54B (TL-3) 809005 Trinity Highway Products, LLC FASTRAC TL-3 CC-54H (TL-3) WIDETRACC 809005 TI-3 Trinity Highway Products, LLC CC-54D (TL-3) 809004 TL-2 CC-26D (TL-2) Energy Absorption Systems, REACT 350 / 350 II / 350 CZ Inc. 809005 TL-3 CC-26E (TL-3) 809004 TL-2 CC-85A (TL-2) Work Area Protection Smart Cushion SCI70GM / SCI100GM CC-85 (TL-3) 809005 TL-3 CC-85B (Evaluation) SAND CRASH CUSHION ARRAYS 809007 TrafFix Devices, Inc. Big Sandy MASH TL-3 CC-139 CC-52 809007 TrafFix Devices, Inc. Big Sandy TL-3 CC-52A CC-52B CC-97 809007 Plastic Safety Systems, Inc. CrashGard TL-3 CC-97A Energy Absorption Systems, 809007 Energite III System TL-3 CC-29 Energy Absorption Systems, 809007 Fitch Universal Barrel System TL-3 CC-28

^{1.} Eligibility letters for NCHRP 350 Devices can be found at: https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/listingarchived.cfm?code=cushions

 $^{{\}it 2. Eligibility letters for MASH Devices can be found at:}\\$

https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/listing.cfm?code=cushions

3. Temporary impact attenuators or Sand Crash Cushion Arrays not listed above sholl not be used on any DelDOT construction or mainteance contract without prior written approval from the DelDOT Safety Programs Manager, who is responsible for the above Approved Products List (APL).

^{4.} DelDDT's sunset date for NCHRP 350 tested Temporary Impact Attenuators and Sand Crash Cushion Arrays is January 1, 2025. Contracts that are Advertised on or after January 1, 2025 shall be required to have MASH tested Temporary Impact Attenuators and Sand Crash Cushion Arrays.

Delaware Department of Transportation Approved Products List Temporary PCC Barriers							
Product Name	Manufacturer	Test Level	Testing Criteria	Application	FHWA Eligibility Code		
DelDOT Standard Item No. 807001							
J-J Hook F-Shape Temporary PCC Barrier 20'	EASI-SET Industries	TL-3	MASH 2016	Temporary	<u>B-307</u>		
J-J Hook F-Shape Temporary PCC Barrier 12'	EASI-SET Industries	TL-3	MASH 2016	Temporary	<u>B-300</u>		
	DelDOT St	andard I	tem No. 8	07002			
J-J Hook F-Shape Temporary PCC Barrier Bolt Down in Bituminous Pavement	EASI-SET Industries	TL-3	MASH 2016	Temporary	<u>B-52C</u>		
Strongstown B&K JJ Hook Retrofit V4 Bituminous Pavement	Strongstown B&K	TL-3	MASH 2016	Temporary	<u>B-344</u>		
	DelDOT Standard Item No. 807003						
J-J Hook F-Shape Temporary PCC Barrier Bolt Down in PCC Pavement	EASI-SET Industries	TL-3	MASH 2016	Temporary	<u>B-52B</u>		
Strongstown B&K JJ Hook Retrofit V3 Concrete Pavement	Strongstown B&K	TL-3	MASH 2016	Temporary	<u>B-258</u>		

^{1.} DelDOT's sunset date for NCHRP 350 tested Longitudinal Barriers is January 1, 2025. Contracts that are Advertised on or after January 1, 2025 shall be required to have MASH tested Longitudinal Barriers.

Delaware Department of Transportation								
Approved Products List								
Temporary Sign Stands								
Product Name	Manufacturer	Test Level	Testing Criteria	Application	FHWA Eligibility Code			
DelDOT Standard Item No. 810001								
SZ-460-2S SZ-484-2S	BONE SAFETY SIGNS	TL-3	NCHRP-350	Temporary	<u>WZ-275</u>			
TF60 TF84-7	DICKE TOOL COMPANY	TL-3	NCHRP-350	Temporary	<u>WZ-141</u>			
X-561	EASTERN METAL / USA SIGN	TL-3	NCHRP-350	Temporary	<u>WZ-56</u>			
X-602	EASTERN METAL / USA SIGN	TL-3	NCHRP-350	Temporary	<u>WZ-78A</u>			
SS548E; SS548AE; SS548AEE SS548CE; SS548CAE SS548EE SS560AE; SS560AEE SS560E; SS560EE	KORMAN SIGNS, INC.	TL-3	NCHRP-350	Temporary	<u>WZ-100</u>			
SS560 SS560A	KORMAN SIGNS, INC.	TL-3	NCHRP-350	Temporary	<u>WZ-29</u>			
4850RBK	MARKETING DISPLAYS INTERNATIONAL TRAFFIC CONTROL PRODUCTS		NCHRP-350	Temporary	<u>WZ-28</u>			
4860К	MARKETING DISPLAYS INTERNATIONAL TRAFFIC CONTROL PRODUCTS	TL-3	NCHRP-350	Temporary	<u>WZ-69</u>			
4884K 4884KET	MARKETING DISPLAYS INTERNATIONAL TRAFFIC CONTROL PRODUCTS	TL-3	NCHRP-350	Temporary	<u>WZ-138</u>			
BIG BUSTER PORTABLE SIGN STAND	TRAFFIX DEVICES, INC.	TL-3	NCHRP-350	Temporary	<u>WZ-46</u>			
SUPER BUSTER PORTABLE SIGN STAND	TRAFFIX DEVICES, INC.	TL-3	NCHRP-350	Temporary	<u>WZ-234</u>			
SS410A		TL-3	MASH16	Temporary Approved for Roll-Up Signs only	<u>WZ-354</u>			
SS520A		TL-3	MASH16	Temporary Approved for Roll-up Signs only	<u>WZ-356</u>			
		TL-3	MASH16	Temporary 60" mounting height Approved for Corrugated Plastic Signs only	<u>WZ-424</u>			
SS620A	Plasticade	TL-3	MASH16	Temporary 84" mounting height Approved for Corrugated Plastic Signs only	<u>WZ-425</u>			
		TL-3	MASH16	Temporary 84" mounting height Approved for Roll-up Signs only)	<u>WZ-426</u>			
SSRB800 **		TL-3	MASH16	Temporary	<u>WZ-342</u>			
SS300/SS300A **		TL-3	MASH16	Temporary	WZ-351			
SS310/SS310A **		TL-3	MASH16	Temporary	WZ-352			
SS340A **		TL-3	MASH16	Temporary	WZ-353			
SS420A **	MDI Waridaa	TL-3	MASH16	Temporary	<u>WZ-355</u> WZ-357			
MDI 4860M-LT 4860K	MDI Worldwide	TL-3	MASH16	Temporary				
486UK	MDI	TL-3	NCHRP-350	Temporary	<u>WZ-69</u>			

^{1.} Temporary sign stands placed on Delaware roadways shall have a minimum mounting height of 5 feet (60 inches) from the bottom of the sign to roadway. Signs not meeting this height requirement will not be found on the Approved Products List (APL) and will not be accepted nor considered for use. Futhermore, temporary sign stands shall only be used for a maximum of 72 hours (3 days). The only exceptions provided for are documented utility conflicts and instances where ground mounting will be improbable or impossible based on the type of surface a ground mounted post would need to be driven. In cases of utility conflicts, contractor must provide in writing, with supporting documentation, the nature of the conflict and present to the Delaware Department of Transportation's Project Engineer and Safety Officer, as well as the lead inspector for the contract.

^{2.} DelDOT's sunset date for NCHRP 350 tested Temporary Sign Stands is January 1, 2025. Contracts that are Advertised on or after January 1, 2025 shall be required to have MASH tested Temporary Sign Stands.

^{**} For survey crew use only

Delaware Department of Transportation Approved Products List Type III Barricades

Product	Manufacturer	Test Level	Testing	Application	FHWA Eligibility Code		
Name	D. IDOT CL.		Criteria	24			
DelDOT Standard Item No. 813001							
T3B TYPE III Barricade	DAVIDSON PLASTICS CORPORATION	TL-3	NCHRP-350	Temporary	<u>WZ-39</u>		
IRS TYPE III Barricade	IMPACT RECOVERY SYSTEMS, INC.	TL-3	NCHRP-350	Temporary	<u>WZ-110</u>		
WBT3-BR TYPE III Barricade		TL-3	NCHRP-350	Temporary	<u>WZ-100 # 3</u>		
WBT3-BRH TYPE III Barricade					WZ-100		
WBT3-SW TYPE III Barricade WBT3-SWH TYPE III Barricade	KORMAN SIGNS, INC.				WZ-100 # 3		
Portable TYPE III Barricade		TL-3	NCHRP-350	Temporary	<u>WZ-11</u>		
Angle Iron Portable TYPE III Barricade Telespar Portable TYPE III Barricade	PLASTICADE PRODUCTS				<u>WZ-54</u>		
PST-111 TYPE III Barricade	PLASTIC SAFETY	TL-3	NCHRP-350	Temporary	<u>WZ-61</u>		
ANCHOR BARRICADE PST-111 TYPE III Barricade	SYSTEMS, INC.				<u>WZ-152</u>		
Sentinel TYPE III Barricade	PMG LIMITED	TL-3	NCHRP-350	Temporary	<u>WZ-104</u>		
TD2400 TYPE III Barricade	THREE D TRAFFIC	TL-3	NCHRP-350	Temporary	<u>WZ-217</u>		
TD2400 TYPE III Barricade	WORKS, INC.				<u>WZ-132</u>		
TD2600 TYPE III Barricade TD2650 TYPE III Barricade	THREE D TRAFFIC WORKS, INC.	TL-3	NCHRP-350	Temporary	<u>WZ-128</u>		
Power Post Type III Barricade	PLASTICADE	TL-3	MASH	Temporary	<u>WZ-327</u>		
Anchor Mast Type III Barricade	PLASTIC SAFETY SYSTEMS, INC.	TL-3	MASH	Temporary	<u>WZ-389</u>		

^{1.} DelDOT's sunset date for NCHRP 350 tested Type III Barricades is January 1, 2025. Contracts that are Advertised on or after January 1, 2025 shall be required to have MASH tested Type III Barricades.

Delaware Department of Transportation Approved Products List TTC Permanent Sign Stands Product Testing FHWA Eligibility Manufacturer **Test Level Application** Name Criteria Code **DelDOT Standard Item No. 810001 HI-PRO 350 UNITED RENTALS** TL-3 NCHRP 350 Permanent WZ-74 * H-BASED TL-2 **PENNDOT** NCHRP 350 Permanent WZ-266 * TL-2 X-BASED Marion Steel Co. TL-3 NCHRP 350 Permanent **SS-57A U-Channel** Chicago Heights TL-3 NCHRP 350 Permanent **SS-54 Posts** Steel Franklin Industries TL-3 NCHRP 350 Permanent **SS-67** Chicago Heights TL-3 NCHRP 350 SS-59A Permanent Steel **U-Channel Bar** Marion Steel Co. TL-3 NCHRP 350 Permanent **SS-56** Spacer

NOTES:

PSST

TL-3

TL-3

Franklin Industries

Allied Tube and

Conduit Corp

NCHRP 350

NCHRP 350

Permanent

Permanent

SS-09

SS-03

^{*} These temporary stands are only used when utility conflict exists OR material exists that prevents ground installation such as concrete; hot mix; brick. All conflicts must be verified and documented by Engineer.

^{1.} DelDOT's sunset date for NCHRP 350 tested permanent sign mounts is January 1, 2025. Contracts that are Advertised on or after January 1, 2025 shall be required to have MASH tested permanent sign mounts.

Delaware Department of Transportation Approved Products List Truck/Trailer Mounted Attenuators

Product Name	Manufacturer	Test Level	Testing Criteria	Application	Support Vehicle Weight	FHWA Eligibility Code		
DelDOT Standard Item No. 808002								
Vorteq Trailer TMA with Integral Arrowboard	Energy Absorption Systems, Inc.	TL-3	NCHRP 350	Trailer	9,920 lbs. MIN	<u>CC-104A</u>		
Alpha 100K TMA @ TL-3	Systems, mc.	TL-3	NCHRP 350	Truck Mounted	16,090 lbs. MIN	<u>CC-39</u>		
TL-3 U-Mad TMA with Sign Board	Barrier Systems	TL-3	NCHRP 350	Truck Mounted	19,000 lbs. MIN 20,000 lbs. MAX	<u>CC-103A</u>		
U-MAD Trailer Mounted Attenuator	Impact Absorption	TL-3	NCHRP 350	Trailer	18,850 lbs. MIN 20,830 lbs. MAX	<u>CC-99</u>		
Trailer TMA-100	Gregory	TL-3	NCHRP 350	Trailer	19,840 lbs. MIN	<u>CC-90A</u>		
TTMA-200	Gregory	TL-3	MASH	Trailer	10,000 lbs. MIN	CC-152		
Safe-Stop 180 Trailer TMA	Trinity Highway	TL-3	NCHRP 350	Trailer	19,000 lbs. MIN	<u>CC-78D</u>		
Safe-Stop 180 TMA		TL-3	NCHRP 350	Truck Mounted	19,000 lbs. MIN	<u>CC-78A</u>		
MPS 350 TMA @ TL-3		TL-3		Truck Mounted	15,000 lbs. MIN	<u>CC-34B</u>		
SS180M TMA	Trinity Highway	TL-3	MASH	Truck Mounted	13,500 lbs. MIN	<u>CC-159</u>		
SMT	Trifficy ringitiway	TL-3	MASH	Trailer	12,000 lbs. MIN	<u>CC-160</u>		
Scorpion Attenuator Trailer		TL-3	NCHRP 350	Trailer	10,000 lbs. MIN	<u>CC-65B</u>		
TMA Scorpion C 10,000 Model C and Model C-90	TrafFix Devices, Inc.	TL-3	NCHRP 350	Truck Mounted	19,840 lbs. MIN	<u>CC-65</u>		
MASH TrafFix Scorpion II		TL-3	MASH	Truck Mounted	15,000 lbs. MIN	<u>CC-132</u>		
Scorpion II Trailer Attenuator		TL-3	MASH	Trailer	12,000 lbs. MIN	CC-138		
U-MAD 100 K Truck Mounted Attenuator	Albert W. Unrath, Inc.	TL-3	NCHRP 350	Truck Mounted	18,988 lbs. MAX	<u>CC-64</u>		
Verdegro BLADE TMA	Verdegro Holding BV	TL-3	MASH	Truck Mounted	16,010 lbs. MIN	<u>CC-136</u>		

^{1.} Truck/Trailer Mounted Attenuators not listed above shall not be used on any DelDOT construction or mainteance contract without prior written approval from the DelDOT Safety Programs Manager, who is responsible for the above Approved Products List (APL).

^{2.} DelDOT's sunset date for NCHRP 350 tested Truck/Trailer Mounted Attenuators is January 1, 2030. Contracts that are Advertised on or after January 1, 2030 shall be required to have MASH tested Truck/Trailer Mounted Attenuators.